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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,772	07/08/2005	Hideo Hata	IWI-16117	1465

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EXAMINER	
SOROUSH, ALI	
ART UNIT	PAPER NUMBER
1616	

MAIL DATE	DELIVERY MODE
12/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,772	HATA ET AL.	
	Examiner	Art Unit	
	ALI SOROUSH	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement of Receipt

Applicant's response filed on 06/29/2009 to the Office Action mailed on 03/31/2009 is acknowledged.

Status of the Claims

Claim 23 is currently amended. Therefore, claims 1-39 are currently pending examination for patentability.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue; and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. The rejection of claims 1-39 under 35 U.S.C. 103(a) as being unpatentable over Mizumaki et al. (Japanese Patent 358124713 A) in view of van Duffel et al. (Multilayered Clay Films: Atomic Force Microscopy Study and Modeling, Published

1999) further in view of Baker et al. (US Patent Application 2003/0163877 A1, Published 09/04/2003) **is maintained**.

Applicant Claims

Applicant claims a water-swellable clay mineral laminated powder, in which a layer of ionic molecule having two or more ionic functional group is laminated on the surface of a base powder particle; a layer of water-swellable clay mineral is laminated thereon.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Mizumaki et al. teach a colored aerosol for application to the hair by combining a stock solution of colorant, mica, a resin, emollient, and a solvent with a propellant. The mica to colorant ration is between 40:60 and 90:10. The mica powder added to the aerosol gives natural gloss to the hair at low dose and reduces the stiffing of the hair caused by repeated application. (See abstract).

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Mizakumi et al. lacks a teaching wherein the mica powder is laminated with a water-swellable clay mineral. This deficiency is cured by the teachings of van Duffel et al.

van Duffel et al. teach "self-assembled natural and synethetic clay-polymer films have been prepared by sequential adsorption of poly(diallyldimethylammonium chloride) (PDDA) and clay particles onto mica. (See abstract). In a preferred embodiment the

"preparation of a monocycle film consists of four steps: (1) a small amount of a PDDA solution was dripped onto a mica slide ... and allowed to stay in contact with the surface for 10 s. (2) The polymer solution was rinsed off with water for 5s. Then the mica slide was dried with dry, filtered air. (3) The clay suspension was dripped (enough to easily cover the whole surface) onto the slide and allowed to stay in contact with the surface for 5s. (4) The suspension was rinsed off with water for 5s, again followed by drying with dry, filtered air." (See page 7521, column 2, Lines 10-19). The preferred clay used was Laponite having a particle size fraction of less than 0.5μm. (See page 7521, column 1, Lines 21-25). "Mica has a negatively charged lattice ... PDDA is a polycationic polymer. Bringing a solution of PDDA into contact with the mica surface will result in ion exchange and binding of the polymer chains to the mica surface by electrostatic attraction ... when clay particles are deposited on mica (without PDDA) from an aqueous suspension and the film is washed, no clay particles are observed ... meaning that they do not bind to mica ... The PDDA is necessary for film formation with the present procedure." (See page 7526, column 1 and 2). van Duffel teach that the clay mineral particles can have molecules confined in the interlamellar space of the clay giving specific photophysical and photochemical properties. (See page 7520, column 1).

Mizakumi et al. and van Duffel lack a teaching wherein the clay mineral particles have dye molecules intercalated in between the layers of the particle. This deficiency is cured by the teachings of Baker et al.

Baker et al. teach a rinse of hair coloring composition comprising clay having a net positive or negative charge at its surface and an agent capable of imparting color to

hair having an opposite charge from the charge on the surface of the clay. The compositions have good color delivery to hair and reduced coloration of the skin. (See abstract).The clays have an average particle size in the range of 0.02µm to 100µm. (See paragraph 0046). The preferred clay is Laponite and the preferred dye is arianor mahogany dye. (See paragraph 0170).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Mizakumi et al. with van Duffel et al. and Baker et al. One of ordinary skill in the art would have been motivated to do so in order to provide the composition of Mizakumi et al. with a hair colorant that would have good color delivery to the hair and at the same time reduce the amount of coloring to the skin. Therefore, one of ordinary skill in the art would apply the composition of Baker et al. using the method taught by van Duffel et al. to the mica powder taught by Mizakumi et al. For the foregoing reasons the instantly claimed invention would have been obvious to one of ordinary skill in the art at the time of the instant invention.

Response to the Applicant's Arguments

Applicant argues that van Duffel et al. is directed to a slide of mica whereas Mizukami et al. is directed a mica powder, therefore there would be no motivation of one of ordinary skill in the art to combine the teachings of van Duffel et al. with Mizukami et al. Applicant's argument has been fully considered but found not to be persuasive. It is the Examiners position that one of ordinary skill in the art would be motivated to apply

the method taught by van Duffel et al. to the mica powder taught by Mizukami et al. One would have been motivated to do so because such a method would allow for a dye to be applied to the hair while at the same time reduce the coloring of the skin underneath and around the application site. One would have expected success because the only distinction between the mica taught by van Duffel et al. and Mizukami et al. is the dimensions of the mica being modified.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time of the claimed invention was made, and does not include knowledge gleaned only from Applicant's disclosure, such reconstruction is proper. In re McLaughlin, 443 F.2d 1392; 170 USPQ 209 (CCPA 1971).

Applicant further argues that the combination of Mizukami et al. and Baker et al. would not result in the instantly claimed laminated powder. Applicant's argument has been fully considered but found not to be persuasive. It is the Examines position that the three references combined make the instant invention obvious. Baker et al. provides the motivation to apply to clay dye material for application to the hair. Van Duffel et al. teach a method by which the clay/dye complex of Baker et al. can be applied to the mica powder of Mizakumi et al. Baker et al. teach that such a complex would be beneficial in order to apply the dye to the hair but limit the application of the dye to the surrounding

skin. For the foregoing reasons, the rejection of claims 1-39 under 35 U.S.C. 103(a) is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Soroush whose telephone number is (571) 272-9925. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ernst V Arnold/

Primary Examiner, Art Unit 1616